AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 3, and 5, and cancel Claims 2, 4, and 8-9 as follows, without prejudice or disclaimer to continued examination on the merits:

1. (Currently Amended): A system, comprising:

a transmitter element creating an interrogation signal and transmitting the interrogation signal; and

a receiver element receiving and demodulating a reflection signal of the interrogation signal and combining the reflection signal and a feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal, wherein the reflection signal comprises an error component comprising interrogation signal energy reflected from objects in an environment other than a radio frequency tag, and wherein the feedback signal comprises the at least a portion of radio frequency echo signals comprising the error component at lower frequencies than a data signal of interest;

wherein the feedback signal is derived by isolating the error component of the reflection signal, and wherein the error component of the reflection signal is isolated by low pass filtering the reflection signal.

2. (Canceled)

3. (Currently Amended): The system according to claim [[2]] 1, wherein the error component of the reflection signal is isolated in one of an in-phase signal and a quadrature signal.

4. (Canceled)

5. (Currently Amended): The system according to claim [[4]] 1, wherein the feedback signal is combined with the reflection signal within an impulse response time of a filtering element which is filtering the reflection signal.

6. (Previously Presented): The system according to claim 1, wherein the reflection signal is reflected by the radio frequency tag and other objects in the environment other than the radio frequency tag.

7. (Previously Presented): The system according to claim 1, wherein the feedback signal is derived through one of analog processing and digital processing.

8 – 9. (Canceled)

10. (Previously Presented): A method, comprising the steps of:

demodulating a reflection signal into an in-phase signal and a quadrature signal;

low pass filtering the in-phase signal to isolate an in-phase error signal;

low pass filtering the quadrature signal to isolate a quadrature error signal;

modulating the in-phase error signal and the quadrature error signal to create an in-phase feedback signal and a quadrature feedback signal;

combining the in-phase signal with the in-phase feedback signal and the quadrature signal with the quadrature feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal; and

band pass filtering each of the combined in-phase signal and in-phase feedback signal and the combined quadrature signal and quadrature feedback signal.

11. (Previously Presented): The method according to claim 10, wherein the filtering steps comprises isolating a base band error signal at a lower frequency than a data signal of interest.

12. (Original): The method according to claim 10, further comprising the step of: amplifying the feedback signal prior to the combining step.

13. (Original): The method according to claim 10, further comprising the steps of:

converting the in-phase signal and the quadrature signal from an analog signal to a digital signal; and

converting the in-phase error signal and the quadrature error signal from a digital signal to an analog signal.

14. (Previously Presented): A system, comprising:

a demodulator to demodulate a reflection signal into an in-phase signal and a quadrature signal;

a first low pass filter to isolate an in-phase error signal from the in-phase signal;

a second low pass filter to isolate a quadrature error signal from the quadrature signal;

a modulator to modulate the in-phase error signal and the quadrature error signal to create a feedback signal;

a combiner element to combine the in-phase signal with the in-phase feedback signal and the quadrature signal with the quadrature feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal;

a first band pass filter to band pass filter the combined in-phase signal and in-phase feedback signal; and

a second band pass filter to band pass filter the combined quadrature signal and quadrature feedback signal.

15. (Previously Presented): The system according to claim 14, wherein the first and second filters are configured to isolate a base band error signal at a lower frequency than a data signal of interest.

16. (Original): The system according to claim 14, wherein the combiner element is one of a radio frequency splitter and a directional coupler.

17. (Original): The system according to claim 14, further comprising:

an amplifier to amplify the feedback signal before input into the combiner element.

18. (Previously Presented): A system comprising:

a demodulator to demodulate a reflection signal into an in-phase signal and a quadrature signal;

a first filter to isolate an in-phase error signal from the in-phase signal;

a second filter to isolate a quadrature error signal from the quadrature signal;

a modulator to modulate the in-phase error signal and the quadrature error signal to create a feedback signal;

a combiner element to combine the reflection signal and the feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal; and

a sample and hold element that activates a hold mode when a reflection signal is receiving a backscatter signal.

19. (Original): The system according to claim 14, further comprising:

a third filter to filter the feedback signal before input into the combiner element.

20. (Previously Presented): The system according to claim 1, further comprising:

a single antenna connected to the transmitter element and the receiver element.